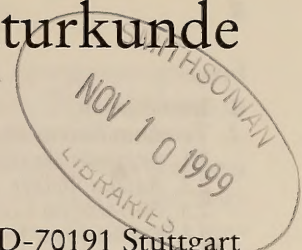


Stuttgarter Beiträge zur Naturkunde

Serie A (Biologie)

Herausgeber:

Staatliches Museum für Naturkunde, Rosenstein 1, D-70191 Stuttgart



QH
5
S932
NH

Stuttgarter Beitr. Naturk.	Ser. A	Nr. 585	15 S.	Stuttgart, 30. 4. 1999
----------------------------	--------	---------	-------	------------------------

An annotated list of Stratiomyidae (Diptera) from Sri Lanka with taxonomic notes on some genera

By Martin Hauser, Stuttgart and Rudolf Rozkošný, Brno

With 14 figures and 1 table

Summary

An annotated list of soldier flies from Sri Lanka is compiled as a result of the critical revision of published records and a study of material deposited in the State Museum of Natural History, Stuttgart (SMNS) and in the authors' collections.

Taxonomic notes are given for the genera *Argyrobrithes* Grünberg, *Aulana* Walker, *Microchrysa* Loew, *Odontomyia* Meigen, *Oplodontha* Rondani, *Ptilocera* Wiedemann, *Sargus* Loew, *Tinda* Walker und *Wallacea* Doleschall. The previously unknown male of *Odontomyia angustilimbata* Brunetti, 1923 is described for the first time. *Sargus mactans* Walker, 1860 is resurrected from the synonymy, and distinguishing characters on the male genitalia of two species from the *Sargus metallinus*-group are illustrated. The revised list includes 30 species, 10 of them being endemic in Sri Lanka. Comments on these species refer to published records, distribution and data concerning the examined material (if available).

Key words: Stratiomyidae, Oriental region, Sri Lanka, faunistics, taxonomy.

Zusammenfassung

Als Resultat einer kritischen Revision von Literaturangaben und Material aus der Sammlung des Staatlichen Museums für Naturkunde Stuttgart (SMNS), und der Sammlungen sowie der Autoren, wird eine mit Anmerkungen versehene Liste der Waffenfliegen Sri Lankas zusammengestellt.

Zu folgenden Gattungen werden taxonomische Anmerkungen gemacht: *Argyrobrithes* Grünberg, *Aulana* Walker, *Microchrysa* Loew, *Odontomyia* Meigen, *Oplodontha* Rondani, *Ptilocera* Wiedemann, *Sargus* Loew, *Tinda* Walker und *Wallacea* Doleschall. Das bisher unbekannte Männchen von *Odontomyia angustilimbata* Brunetti, 1923 wird zum ersten Mal beschrieben, *Sargus mactans* Walker, 1860 wird aus der Synonymie gehoben und Unterscheidungsmerkmale der männlichen Genitalien von zwei Arten der *Sargus metallinus*-Gruppe werden abgebildet. Die revidierte Liste umfaßt 30 Arten, von denen 10 endemisch auf Sri Lanka vorkommen. Kommentare zu jeder Art beziehen sich auf Literaturzitate, Verbreitung und die Funddaten des untersuchten Materials.



SHOUT
SHARE IT

Contents

1. Introduction	2
2. Taxonomic notes on some genera	2
2.1. <i>Argyrobrithes</i> Grünberg and <i>Wallacea</i> Doleschall	2
2.2. <i>Aulana</i> Walker	3
2.3. <i>Microchrysa</i> Loew	3
2.4. <i>Odontomyia</i> Meigen and <i>Oplodontha</i> Rondani	3
2.5. <i>Ptilocera</i> Wiedemann	6
2.6. <i>Sargus</i> Loew	6
2.7. <i>Tinda</i> Walker	8
3. Annotated list of Stratiomyidae recorded from Sri Lanka	8
4. Acknowledgments	14
5. Literature	14

1. Introduction

The recent list of the Stratiomyidae known from Sri Lanka includes 30 species (JAMES, 1975; ROZKOŠNÝ & HAUSER, 1998). GERSTAECKER (1857) was probably the first author who mentioned stratiomyids from this island. BIGOT (1879) described a new species: *Sargus pallipes* (= *S. metallinus* Fabricius) and BRAUER (1882) described *Acraspidea felderi* which has been recognized, however, as a synonym of *Aulana confirmata* Walker. Two records of *Sargus* species were later added by VAN DER WULP (1885). BRUNETTI (1907) registered only 4 earlier records from Sri Lanka and, later on, in the Fauna of British India, including Ceylon and Burma (BRUNETTI, 1920), he recorded 7 species from the then Ceylon; in his revision of Oriental Stratiomyidae (BRUNETTI, 1923) he mentioned 13 more species. Only one species treated in his identification key (*Odontomyia angustilimbata*) was subsequently described in detail (BRUNETTI, 1925). A special study devoted to Stratiomyidae from Ceylon was published by LINDNER (1955). He identified 22 species including two new genera and three new species in the material collected by F. KEISER in 1953–1954. Recently we have studied a series of specimens collected on Sri Lanka by C. KASSEBEER (Kiel) and Dr. C. SCHMID-EGGER (Karlsruhe) in 1994 and O. NIEHUIS (Marburg) in 1996. We revised some specimens from the E. LINDNER collection preserved in the Staatliches Museum für Naturkunde in Stuttgart (SMNS). Among the material examined we found a new species of the widely distributed genus *Ptecticus* (Sarginae) which is externally very similar to *Ptecticus australis* Schiner, 1868, but differs markedly by the shape of the male genitalia (cf. ROZKOŠNÝ & HAUSER, 1998). Moreover, we correct some further misidentifications by earlier authors.

2. Taxonomic notes on some genera

2.1. *Argyrobrithes* Grünberg and *Wallacea* Doleschall

KERTÉSZ (1921) suggested that the *Wallacea* species of earlier authors should be divided into two genera. According to his concept, *Argyrobrithes* includes species with a considerably flattened antennal style, whereas *Wallacea* possesses a densely haired and often almost cylindrical style.

KRIVOSHEINA (1983) defined distinguishing characters for the most Oriental species of both genera in her revisional study. The male of "*Wallacea separata*" from the

LINDNER collection shows the black, flattened antennal style, contiguous eyes and the last abdominal tergite bearing a median stripe of whitish hairs. Thus it belongs to *Argyrobrithes albopilosus* and not to *Wallacea separata* as LINDNER believed.

The second species of this group which was treated by LINDNER (1955), *Wallacea albiseta*, differs from the related species by the arrangement of relatively short marginal cornicles on the scutellum, pale tibiae, the silvery pile on the scutum and a longitudinal median stripe of silvery hairs on tergite 5 (cf. KRIVOSHEINA, 1983). The identification of LINDNER's two females was confirmed as correct.

2.2. *Aulana* Walker

Aulana includes 5 Oriental species characterized by long and slender antennae and a typical wing venation. *A. confirmata* has a black haired antennal style, somewhat upwards oriented scutellum and a brown middle band on each femur. The available specimens were reexamined using the key compiled by HOLLIS (1963).

2.3. *Microchrysa* Loew

All Oriental species of *Microchrysa* ought to be revised in the same way as the Afrotropical species were by MASON (1997). So far, only the widespread Oriental *M. flaviventris*, with the westernmost records from the Comoro Is., Madagascar and the Seychelle Is., may be reliably identified according to the mentioned monograph. All the revised specimens from the LINDNER collection display the incomplete discal cell and the examined male possesses the characteristic aedeagal complex (Fig. 1). The female is characterized by a relatively long pile on the ocellar triangle and a long fringe of hairs on the distal margin of the third flagellomere.

The second species from Sri Lanka, *M. vertebrata*, is based on two females. This species seems to be characterized by the peculiar pale pattern on the female abdomen (Fig. 2). Unfortunately the male is not known and thus the relationships to other Oriental species cannot be discussed.

2.4. *Odontomyia* Meigen and *Oplodontha* Rondani

When revising 6 specimens from LINDNER's "*Odontomyia minuta*" deposited in Stuttgart, we found that the pale specimens of this originally extensive series (36 males and 12 females) belonged really to *Oplodontha minuta* (Fabricius) whilst the dark ones belong to *Odontomyia angustilimbata* Brunetti. The latter species was briefly characterized in BRUNETTI's key to the Oriental *Odontomyia* species (BRUNETTI, 1923) but described from the two female specimens two years later (BRUNETTI, 1925). The male is described here for the first time.

Odontomyia angustilimbata Brunetti

Description of the male:

Head. – Black, with conspicuously produced and rounded face (Fig. 3). Large eyes touching for a relatively long distance leaving only narrow, elongate triangular upper frons in front of ocellar triangle free. Distance of posterior ocellus to hind eye margin shorter than that between anterior and posterior ocelli in dorsal view. Lower frons above antennae short, subtriangular. Face hemispherically protuberant, peristomal margin relatively long. Antenna brown (Fig. 3), flagellum darkened. Ba-

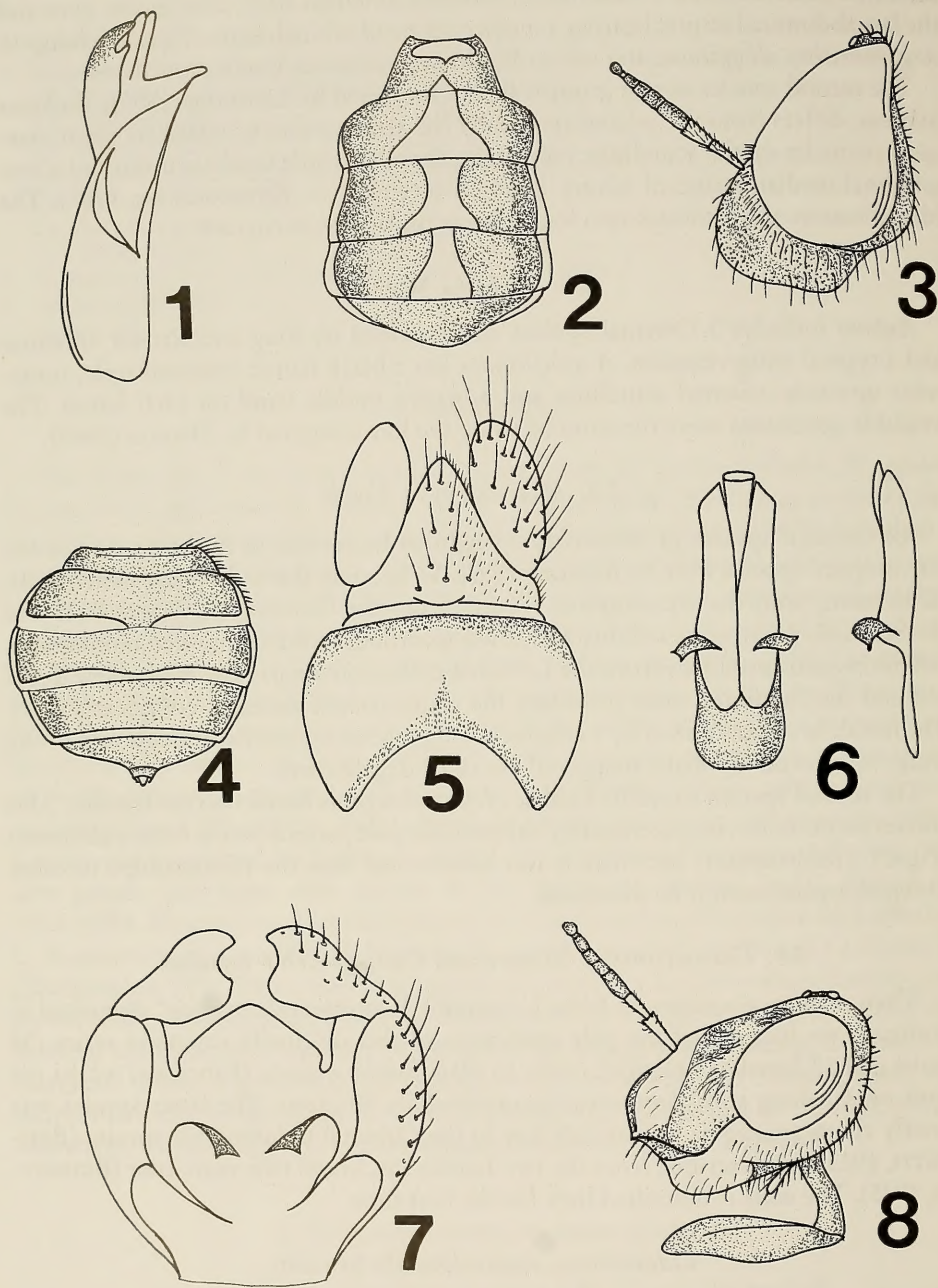


Fig. 1. *Microchrysa flaviventris* (Wiedemann), aedeagal complex in lateral view.

Fig. 2. *Microchrysa vertebrata* Lindner, female abdomen, dorsal view.

Figs. 3-8. *Odontomyia angustilimbata* Brunetti. - 3. Male head in lateral view; - 4. male abdomen in dorsal view; - 5. male proctiger, cerci and epandrium; - 6. aedeagal complex in dorsal and lateral view; - 7. male synsternite and gonostyli; - 8. female head in lateral view.

sal antennal segments combined about as long as flagellum, scape about 1.5 times longer than pedicel. Six flagellomeres distinct, basal one about as long as the two following ones. Flagellomere 4 somewhat conical, flagellomere 5 very narrow, ring-shaped, and flagellomere 6 flattened, almost quadrate. Sensillae covering basal 3 flagellomeres whitish. Proboscis rather long and slender. Head pile yellowish to pale brown and upright on vertex, ocellar triangle and upper frons. Very dense, silvery white and appressed hairs distinct on frontal triangle above antennae and a group of similar hairs at the eye margin in middle of face. Other parts of face and gena with white to yellow sparse hairs reaching longest length on ventral part of head.

Thorax. – Black, only posterior margin of scutellum including a pair of scutellar spines broadly yellow. Scutellar spines relatively short, almost cylindrical, slightly curved innerwards. Thoracic pile pale yellow, erect on scutum, reaching the length of antennal scape, semierect on pleura. In addition scutum (and partially also pleura) covered with short and appressed golden yellow hairs.

Wing. – Without any infumation and microtrichia. Veins and pterostigma yellow, only discal cell and adjoining parts of some veins more brownish. Vein R_4 present, discal cell relatively small, M_1 missing but its root visible, M_3 completely absent. Veins M_2 and CuA_1 ending far before wing margin. Posterior crossvein slightly longer than anterior one. Squamae greyish with white hairs, halteres yellow with darkened stalks.

Legs. – Chiefly yellow but all coxae predominantly black. All femora with a broad ring in apical half each, also last 2–3 tarsomeres darkened on each pair of legs. Yellow pile mostly inconspicuous but dense and long on posterior side of all femora.

Abdomen. – Subcircular (Fig. 4), even very slightly broader than long, predominantly shining dark brown to black. Yellow pattern consisting of narrow lateral margin and somewhat broader posterior margins of tergites 2–5. Yellow transverse stripe on tergite 2 considerably narrowed or even interrupted in middle. Sternites 2–5 with broad yellow stripes becoming narrower to distal end of abdomen. In this way, stripe on tergite 2 occupying its whole middle part, on sternite 3 is somewhat broader than half sternite width and which on sternite 4 is narrower than black part. Abdominal pile fine and pale, semi-erect to erect, long dorsolaterally and ventrobasally.

Male genitalia (Figs. 5–7). Relatively small and simple. Proctiger subtriangular, almost equilateral, cerci short and oval. Epandrium broader than long, with pointed proximal corners. Medial process of synsternite well developed, broadly triangular, its apex rounded. Dististylus bilobate on inner side, distal lobe pointed. Aedeagal complex rather flat in lateral view, parameres slightly shorter than aedeagus and appressed along their whole length.

Body length. – 5.7 mm, wing length 4.6 mm.

The female was briefly described by BRUNETTI (1925). Here some additional facts:

Head. – Much longer than high, face almost as long as height of eye, rounded apically (Fig. 8). Frons broader than one eye in dorsal view, postocular area slightly narrower than antennal pedicel. Gena reaching about 1/3 of eye height. Colour of head black with extensive yellow pattern occupying central area of face and a triangular part of frons above antennae, anteriorly leaving only very narrow peristomal margin black. Moreover, face with brownish middle longitudinal stripe. Yellow ventral and

posterior part of head separated from facial patch by a broad black stripe between eye and peristomal margin. Yellow ventral part of head interrupted by a blackish subtringular spot distinct in middle of ventral peristomal margin in lateral view. Postocular area darkened in upper part but its hind corner at level of inner posterior angle of eye partly yellowish. Flagellomere 5 of antenna almost indistinct and flagellomere 6 slightly bilobate apically. Proboscis black, palpi yellow. Head pile white to yellowish, mostly sparse and appressed, only on ventral part of head and palpi long and erect. Three subcircular patches consisting of dense silverish white hairs distinct in black area of frons and peristomal stripe at eye margin.

Thorax. – Chiefly black, only propleura and posterior corner of katapisternum yellow. Scutellum yellow, with black basal third. Scutum with short and appressed yellowish hairs.

Wings. – As in male but pterostigma more brownish.

Legs and abdomen. – As in male, but long hairs on posterior side of femora missing, posterior margin of tergite 1 predominantly yellow, yellow posterior stripe on tergite 2 not interrupted in middle and yellow pattern on venter more extended, particularly in middle area. Bisegmented cerci yellow.

Body length. – 5.6 mm, wing length 4.7 mm.

Oplodontha Rondani

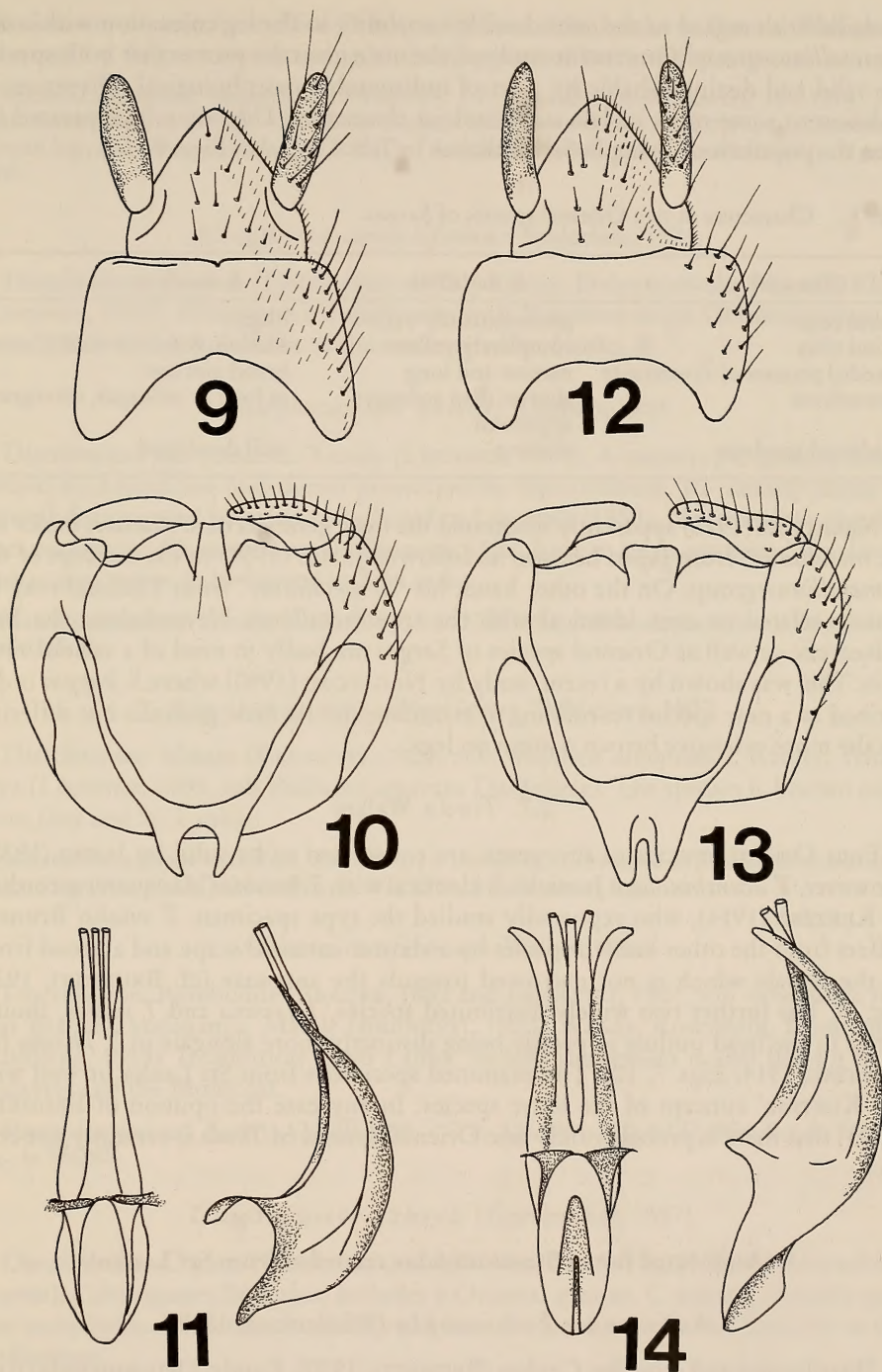
Oplodontha Rondani differs from *Odontomyia* Meigen by a very small or lacking discal cell and a partly reduced wing venation (R_s unbranched and M veins usually reduced to a stump and a fold) and is generally accepted by recent authors. From 4 Oriental species 3 are keyed by JAMES (1947). *Oplodonta minuta* is characterized by the conspicuous pale spots on the pleura, completely yellow fore and mid tibiae and the hind femur and tibia each bearing a broad dark ring. The scutellum in the specimens examined is predominantly black, with the posterior margin including spines being broadly yellow. *O. rubrithorax*, the second species found in Sri Lanka, differs remarkably by the missing pleural spots, the entirely yellow hind femur and tibia and the wholly black scutellum.

2.5. *Ptilocera* Wiedemann

The genus is characterized by the peculiar antennae which are particularly conspicuous in females. Seven Oriental species need revision, the diagnostic characters in the published keys (KERTÉSZ, 1916; BRUNETTI, 1923) appear to be at least partly problematic. *P. fastuosa* shows the blackish darkened wings with a transverse yellow stripe from the pterostigma to the upper part of M_3 . The females are probably characterized by the densely punctate and thus virtually granulate upper half of the frons and vertex. The pattern consisting of metallic scales on the scutum and hairs on the abdomen seems to be largely variable. Illustrations of the male genitalia are to be found in KERTÉSZ (1916: Figs. 43–45).

2.6. *Sargus* Loew

Of the Oriental *Sargus* species at least two occur in Sri Lanka. According to the distinguishing characters pointed out by VAN DER WULP (1885), BRUNETTI (1907, 1920, 1923) and DE MEIJERE (1911) they fit well with *S. metallinus* (Fabricius) and *S. mactans* Walker. However JAMES (1957, 1975) considers both these species to be



Figs. 9–11. *Sargus metallinus* Fabricius, male genitalia. – 9. Dorsal part; – 10. synsternite and gonostyli; – 11. aedeagal complex in dorsal and lateral view.

Figs. 12–14. *Sargus mactans* Walker, male genitalia. – 12. Dorsal part; – 13. synsternite and gonostyli; – 14. aedeagal complex in dorsal and lateral view.

identical with regard to the considerable variability in the leg coloration within the *S. metallinus*-group. Our recent study of the male genitalia proves that both species are valid and distinguishable by a set of indisputable morphological differences in addition to some more or less stable colour characters. They may be separated (at least the populations living in Sri Lanka) as in Tab. 1 (cf. also Figs. 9–14).

Tab. 1. Characters of two Oriental species of *Sargus*.

Character	<i>S. metallinus</i>	<i>S. mactans</i>
hind coxa	predominantly yellow	black
hind tibia	completely yellow	black in basal 1/3–1/2
medial process of synsternite	narrow and long	broad and low
parameres	shorter than aedeagus, appressed	as long as aedeagus, divergent
aedeagal apodeme	missing	well developed

NAGATOMI (1975) apparently illustrated the male genitalia of *S. mactans* under his “*S. metallinus*” from Japan because he followed JAMES (1957) in the concept of the *S. metallinus*-group. On the other hand, his “*S. metallinus*” from Thailand may be closely related or even identical with the true *metallinus*. Nevertheless, the East Palaearctic as well as Oriental species of *Sargus* are badly in need of a serious revision. This was shown by a recent study by NAGATOMI (1990) where *S. beppui* is described as a new species resembling *S. metallinus* by its male genitalia but differing by the more extensive brown pattern on legs.

2.7. *Tinda* Walker

Four Oriental species of this genus are considered to be valid by JAMES (1975). However, *T. acanthinoidea* Jaenicke is identical with *T. javana* (Macquart) according to KERTÉSZ (1914), who reportedly studied the type specimen. *T. vitalisi* Brunetti differs from the other known species by a shorter antennal scape and a broad frons in the female which is not narrowed towards the antennae (cf. BRUNETTI, 1924: Fig. 3). The further two widely distributed species, *T. javana* and *T. indica*, should differ in the head outline in profile being distinctly more elongate in *T. javana* (cf. KERTÉSZ, 1914: Figs. 7, 10). The examined specimens from Sri Lanka fit well with the KERTÉSZ’ concept of the latter species. In any case the opinion of BRUNETTI (1923) that there is probably only one Oriental species of *Tinda* is certainly not correct.

3. Annotated list of Stratiomyidae recorded from Sri Lanka¹⁾

Adoxomyia hemienopla (Wiedemann, 1819)

Distribution and remarks: Ceylon (BRUNETTI, 1920), Kandy, Deiyannewela, Ambacotta, Teldeniya, Negombo, Puttalam, Mannar, Kankasanturai (LINDNER, 1955). Apparently the most widely distributed from the three Oriental species of this ge-

¹⁾ Endemic species marked with E.

nus; known to occur from West Pakistan, India and Sri Lanka to Burma. Well characterized by the pattern consisting of short appressed hairs on the scutum.

Material examined: Negombo, 4.VIII.1953, 1 ♀; – Kandy Deiyannawela, 18.I.1954, 1 ♀, both KEISER leg., in SMNS; – South Sri Lanka, Galle, Unawatuna, 18.X.1994, 1 ♂, SCHMIDT-EGGER leg.; – Tissamaharama, 15.X.1994, 4 ♂♂ in HAUSER coll.; 6 ♂♂, KASSEBEER leg. & coll., Kiel.

Allognosta annulifemur Enderlein, 1921

Distribution: Ceylon (ENDERLEIN, 1921), Kandy, Deiyannawela, Nuwara Eliya (LINDNER, 1955). *Allognosta* is a rich genus with 25 species in the Oriental region. *A. annulifemur* is not found out of the territory of Sri Lanka. E.

Ankylacantha keiseri Lindner, 1955

Distribution and remarks: Kandy (LINDNER, 1955). A monotypic genus characterized by a hooklike mid-dorsal projection on the scutellum. Its identity seems to be well documented by a figure included in LINDNER (1955). Nevertheless, the distinct relation to *Monacanthomyia* Brunetti, 1912, have to be re-examined. Its distribution area seems to be limited to Sri Lanka.

Material examined: Kandy, 10.IX.1953, 1 ♀; 12.IX.1953, 1 ♀ (both paratypes); KEISER leg., in SMNS. E.

Argyrobrithes albopilosus DeMeijere, 1907

Distribution: Matale (BRUNETTI, 1923, sub *Wallacea albopilosa*), Kandy, Teldeniya (LINDNER, 1955, sub *Wallacea separata* DeMeijere). The species is known only from Java and Sri Lanka.

Material examined: Teldeniya, 20.I.1954, 1 ♂, in SMNS (identified as *Wallacea separata*). – Eliya, Haputale, 30 km SE Nuwara, 31.VII.1996, 1 ♀, NIEHUIS leg.

Aulana confirmata Walker, 1864

Distribution: Rambodde (BRAUER, 1882 and BRUNETTI, 1907, sub *Acraspidea felderi* Brauer), Sudaganga, Matale (BRUNETTI, 1923), Kandy, Roseneath, Peredeniya (LINDNER, 1955). In addition to Sri Lanka, *Aulana confirmata* is also known from Malaysia and the Moluccas.

Material examined: Kandy, 12.VIII.1953, 2 ♀♀; 3.II.1954, 1 ♀; 17.II.1954, 2 ♂♂; KEISER leg., in SMNS.

Cibotogaster azurea (Gerstaecker, 1857)

Distribution: Ceylon (GERSTAECKER, 1857 and BRUNETTI, 1907, sub *Acanthina azurea*). *Cibotogaster* Enderlein includes 6 Oriental species. *C. azurea*, the only species recorded in Sri Lanka, is widespread from Sri Lanka, India and Sumatra to the Philippines.

Hermetia illucens (Linné, 1758)

Distribution: Kandy, Pitakanda, Deiyannawela, Hantana, Lady Horton's Drive, Peradeniya, Haragama, Wariagala, Rajakadalawa, Dambulla, Kantalai, Welimada –

Uva Ben Head (LINDNER, 1955). Spread by commerce through the warm parts (tropics and subtropics) all over the world.

Material examined: Peradeniya Exper. Stat., 5.VI.1953, 1 ♂; – Kandy Pitakanda, 19.VI.1953, 1 ♀; both KEISER leg., in SMNS; – Kandy, Kandy lake, 500 m, 10.X.1994, 1 ♀; – Tjssamaharama, 15.X.1994, 4 ♀ ♀; – Colombo, Piliyandala, 9.X.1994, 10 ♂ ♂, 1 ♀; all KASSEBEER leg. & coll., Kiel.

Hermetia inflata (Walker, 1859)

Distribution: Periviponcheram (BRUNETTI, 1923). Widely distributed from Sri Lanka, Sumatra and Java to the Philippines and the Moluccas.

Microchrysa flaviventris (Wiedemann, 1824)

Distribution: Ceylon (BIGOT, 1879 and BRUNETTI, 1907, as *Microchrysa gemma* Bigot), Peradeniya (BRUNETTI, 1920), Trincomalee – Hot Wells (BRUNETTI, 1923), Kandy, Deiyannawela, Lady Blake's Drive, Peradeniya, Ganoruwa (LINDNER, 1955). Widespread in the Oriental region, eastern part of the Palaearctic region and Oceania from West Pakistan through India, Sri Lanka, Thailand, Malaya, Sumatra and Java to China, Japan, Taiwan, the Philippines, New Guinea, New Caledonia, Mariana Is. and Caroline Is. (JAMES, 1975; NAGATOMI, 1975) but also recorded in eastern part of the Afrotropical region on Madagascar, Comoro Is. and Seychelle Is. (LINDNER, 1966; MASON, 1997).

Material examined: Peradeniya Exper. Stat., 6.VI.1953, 2 ♀ ♀; – Kandy, 2.VII.1953, 1 ♀; 16.II.1954, 1 ♂; all KEISER leg., in SMNS.

Microchrysa vertebrata Lindner, 1955

Distribution: Kandy (LINDNER, 1955). Based on two females, one of which was revised. Only the type material from Sri Lanka is known.

Material examined: Kandy, 6.XI.1953, 1 ♀, KEISER leg., in SMNS. E.

Nigritomyia ceylonica Kertész, 1921

Distribution and remarks: Kandy Roseneath, Lady Horton's Drive, Peradeniya, Haragama (LINDNER, 1955). The Genus *Nigritomyia* is represented by 7 species in the Oriental region. The endemic *N. ceylonica* is characterized by a very typical nose-like protuberance on the lower face in both sexes.

Material examined: Kandy Roseneath, 11.VIII.1953, 1 ♀; – Kandy, 30.IX.1953, 2 ♀ ♀; 23.XI.1953, 1 ♂; all KEISER leg., in SMNS. E.

Nigritomyia maculipennis (Macquart, 1849)

Distribution: Kandy, Heneratgoda, Haragam, Velverry (BRUNETTI, 1923). These records may refer to *N. ceylonica* which was not included in BRUNETTI's revision (1923). According to JAMES (1975), the distribution area includes Sri Lanka, Borneo and the Philippines.

Odontomyia angustilimbata Brunetti, 1923

Distribution and remarks: Trincomalee Hot Wells (BRUNETTI, 1923). BRUNETTI pointed out only diagnostic characters. A detailed description (of the female) was published two years later (BRUNETTI, 1925). The first description of the male is included in our taxonomic notes (see above).

Material examined: Yala, 22.X.1953, 1 ♀; – Tissamaharama, 24.X.1953, 3 ♂♂, 1 ♀; all KEISER leg., in SMNS (misidentified as *O. minuta* Fabricius). E.

Odontomyia cyanea (Brunetti, 1920)

Distribution: Kurunegala – Elephant Rock (LINDNER, 1955). A species which is well known from Sri Lanka and India.

Odontomyia fascipes Brunetti, 1923

Distribution: Trincomalee, Kanthalia (BRUNETTI, 1923), Haragama (LINDNER, 1955). E.

Odontomyia punctifacies Brunetti, 1923

Distribution: Trincomalee, Kuchavilla, Nilawelli Road (BRUNETTI, 1923). E.

Oplodontha minuta (Fabricius, 1794)

Distribution and remarks: Trincomalee, Nilawelli, Periakulam (BRUNETTI, 1923, sub *Odontomyia minuta*), Negombo, Kalpitiya, Mannar, Tissamaharama, Buthawa, Yala (LINDNER, 1955, sub *Odontomyia minuta*). LINDNER's (1955) concept of this species is apparently a mixture of *Oplodontha minuta* and *Odontomyia angustilimbata* (see chapter 2.4.). Our study of 8 original specimens shows that only three really belong to this species. *O. minuta* occurs in Sri Lanka and India.

Material examined: Negombo, 4.VIII.1953, 3 ♂♂, KEISER leg.

Oplodontha rubrithorax (Macquart, 1838)

Distribution: Trincomalee, Kanthalia (BRUNETTI, 1923), Tambuttegama (LINDNER, 1955). A species distributed from Sri Lanka, India and Java to the Philippines.

Oxycera whitei Brunetti, 1923

Distribution: Matale (BRUNETTI, 1923). From 11 Oriental species of this genus only *O. whitei* was recorded in Sri Lanka. E.

Prosopochrysa vitripennis (Doleschall, 1856)

Distribution: Kanthalia, Trincomalee Hot Wells (BRUNETTI, 1923), Welimada (LINDNER, 1955). *Prosopochrysa* de Meijere includes 3 Oriental species, *P. vitripennis* has been recorded from Sri Lanka, India and Java.

Ptecticus australis Schiner, 1868

Distribution and remarks: Peradeniya (BRUNETTI, 1920, 1923), Kanthalia, Nuwara Eliya, Heneratgoda (BRUNETTI, 1923), Kandy, Reservoir, Roseneath, Lady Horton's Drive, Peradeniya (LINDNER, 1955). A widely distributed species in the Oriental region but its occurrence on Sri Lanka needs confirmation. Actually, all Ceylonian specimens identified by earlier authors as *P. australis*, which were recently re-examined, belong to a new species (*P. ceylonicus* ROZKOŠNÝ & HAUSER, 1998).

Ptecticus ceylonicus Rozkošný & Hauser, 1998

Remarks: This recently described species apparently belongs to the endemic taxa of Sri Lanka. The material available was identified by earlier authors as *P. australis*.

Material examined (type series see ROZKOŠNÝ & HAUSER, 1998): Kandy Lake, 500 m, 11.X.1994, 4 ♂♂ (incl. holotype), KASSEBEER leg.; – Kandy, Lady Horton's Drive, 21.VI.1953, 1 ♂, 13.VII.1953, 1 ♂, 26.II.1954, 1 ♂; (all misidentified by LINDNER, 1955 as *P. australis* Schiner), KEISER leg., deposited in the SMNS. E.

Ptecticus cingulatus Loew, 1855

Distribution and remarks: Kandy, Lady Horton's Drive, Deiyannawela, Roseneath (LINDNER, 1955). A modern redescription including figures of the male genitalia is included in ROZKOŠNÝ & KOVAC (1996). A conspicuous species known to occur in Sri Lanka, India, Malaya, Borneo, Sumatra, Java and Taiwan.

Material examined: Hinaduma, 28.IV.1892, 1 ♂, YERBURY leg.; – Kandy, Lady Horton's Drive, 4.VI.1953, 2 ♂♂, KEISER leg.; – Kandy Roseneath, 11.VIII. 1953, 1 ♂, KEISER leg.; all in the SMNS.

Ptilocera fastuosa Gerstaecker, 1857

Distribution: Ceylon (GERSTAECKER, 1857), Kandy, Peradeniya (BRUNETTI, 1920, 1923), Siyambalapitiya, Pitikanda, Deiyannawela, Roseneath, Lady Horton's Drive, Lady Blake's Drive, Peradeniya, Ambacotta, Teldeniya, Mawanella, Kurunegala – Elephant Rock (LINDNER, 1955). Known to occur in India, Sri Lanka, Nicobar Is., Thailand, Malaya, and the Philippines.

Material examined: Kandy, Peradeniya, Exper. Stat., 14.VII.1953, 1 ♂, 1 ♀; – Kandy, Deiyannawela, 17.X.1953, 1 ♂; – Kandy, Roseneath, 12.VII.1953, 1 ♀; all KEISER leg., in SMNS. – South Sri Lanka, Galle, Unawatuna, 18.X.1994, 6 ♂♂, 9 ♀♀, SCHMIDT-EGGER leg., in HAUSER coll.

Ptilocera smaragdina Walker, 1849

Distribution and remarks: Ceylon (BRUNETTI, 1907, 1923). This species may be identical with *P. fastuosa*, but then *P. smaragdina* Walker will have priority (cf. BRUNETTI, 1923). *P. smaragdina* was described from the Philippine Islands and its occurrence on Sri Lanka needs confirmation.

Sargus mactans Walker, 1860

Distribution: Rambodde (VAN DER WULP, 1885). Kandy, Bentota, Peradeniya, Rambodde (BRUNETTI, 1923). Kandy, Deiyannawela, Roseneath, Lady Horton's Drive, Peradeniya (LINDNER, 1955). According to BRUNETTI (1923), this is the se-

cond most common species of *Sargus* in the Oriental region ranging from India, Pakistan and Sri Lanka through Malaya, Borneo, Sumatra, Celebes and Moluccas to Papua New Guinea and northern Queensland in Australia; also in Japan (NAGATOMI, 1975, sub *S. metallinus*).

Material examined: Kandy, Roseneath, 11.VIII.1953, 2 ♀ ♀; – Kandy, 12.VIII.1953, 1 ♀; 27.X.1953, 1 ♂; 1.I.1954, 2 ♂ ♂; all KEISER leg., in SMNS.

Sargus metallinus Fabricius, 1805

Distribution: Ceylon (BIGOT, 1979, sub *Sargus pallipes* Bigot). Rambodde (VAN DER WULP, 1885). "Common in Ceylon" (BRUNETTI, 1923). Kandy, Peradeniya, Hindagala (LINDNER, 1955). Probably the most common member of Sarginae in the Oriental region, known to occur in India, Sri Lanka, Burma, Malaya, China, Sumatra, Java, Borneo, Moluccas and Aru Is.; recorded from Thailand by NAGATOMI (1975).

Material examined: Kandy, 27.XI.1953, 1 ♂; – Peradeniya, Exper. Stat., 15.VIII.1953, 1 ♀; 27.XI.1953, 1 ♀; KEISER leg., in SMNS.

Strophognatus argentatus Lindner, 1955

Distribution: Teldeniya (LINDNER, 1955). E.

Tinda javana (Macquart, 1838)

Distribution and remarks: Kandy, Deiyannewella, Lady Blake's Drive, Peradeniya, Hindagala, Teldeniya, Hingurakgoda (LINDNER, 1955). The most remarkable characters of this genus are the somewhat dorsoventrally flattened head in both sexes, with typical antennae having a long and flat apical style and four scutellar spines. *Tinda javana* is widely distributed from Reunion Island (see material examined), through Sri Lanka, Sumatra, Java, Lombok, Sumba and Celebes to the Philippines.

Material examined: Kandy, 13.X.1953, 1 ♀; 1.I.1954, 1 ♂; 1.III.1954, 1 ♂; all KEISER leg., in SMNS. – South Sri Lanka, Galle, Unawatuna, 18.X.1994, 1 ♀; SCHMIDT-EGGER leg., in HAUSER coll. – Reunion, 23.XII.–30.XII.1994, 1 ♂; OHM leg., in SMNS.

Wallacea albiseta DeMeijere, 1907

Distribution and remarks: Kandy, Welimada – Uva Bem Head, Talatuoya (LINDNER, 1955). Ceylon (S. NIETHNER coll.; KRIVOSHEINA, 1983). A modern redescription of this species was given by KRIVOSHEINA (l.c.), the male genitalia were illustrated by NAGATOMI (1975). The known distribution area includes Sri Lanka, Sumatra, Malaysia, Taiwan (JAMES, 1975) and Japan (NAGATOMI, 1975). KRIVOSHEINA (l.c.) confirmed the occurrence in Sri Lanka and Taiwan, and added Canton in China, India and the Primorye Territory of Russia.

Material examined: Kandy, 3.II.1954, 1 ♀; 17.II.1954, 1 ♀; both KEISER leg., in SMNS. – Eliya, Haputale, 30 km SE Nuwara, 31.VII.1996, 1 ♀. NIEHUIS leg., in HAUSER coll.

Wallacea separata DeMeijere, 1907

Remarks: A record from Ceylon in JAMES (1975) is apparently based on LINDNER's (1955) study. However, according to our revision of the original material

from the LINDNER collection this is a misidentification (see *Argyrobrithes albopilosus*). For the time being, *Argyrobrithes separatus* must be excluded from the list of species living in Sri Lanka.

4. Acknowledgments

Our thanks are due to C. KASSEBEER (Kiel), O. NIEHUIS (Marburg) and Dr. C. SCHMID-EGGER (Karlsruhe) who kindly provided recently collected specimens for our study. Dr. H.-P. TSCHORSNIG (Stuttgart) kindly loaned material from the collection of E. LINDNER. The manuscript was prepared with support by the Grant Agency of the Czech Republic (Grant No. 206/99/1526).

5. Literature

- BIGOT, J. M. F. (1879): Diptères nouveaux ou peu connus. 11^e partie. XVI. Curiae Xylophagidarum et Stratiomyidarum (Bigot). – Anns Soc. ent. Fr. (5)9: 183–234; Paris.
- BRAUER, F. (1882): Die Zweiflügler des Kaiserlichen Museums zu Wien II. – Denkschr. Akad. Wiss., Wien (math.-nat. Kl.) 44: 59–110; Wien.
- BRUNETTI, E. (1907): Revision of the Oriental Stratiomyidae, with *Xylomyia* and its allies. – Rec. Indian Mus. 1: 85–132; Calcutta.
- (1920): Diptera Brachycera, 1. – In: SHIPLEY, A. E. (ed.): The fauna of British India, including Ceylon and Burma. – IX + 401 pp.; London (Taylor & Francis).
 - (1923): Second revision of the Oriental Stratiomyidae. – Rec. Indian Mus. 25: 45–180; Calcutta.
 - (1924): Nouvelles espèces de Stratiomyidae recueillies par M. R. VITALIS DE SALVAZA. – Encycl. ent. (Sér. A, Diptera) 1: 67–71; Paris.
 - (1925): Description of a new species of Oriental Stratiomyidae; also a change of name. – Rec. Indian Mus. 27: 451; Calcutta.
- ENDERLEIN, G. (1921): Über die phyletisch älteren Stratiomyiidenfamilien (Xylophaginae, Chironomyzinae, Solvinae, Beridinae und Coenomyiinae). – Mitt. zool. Mus. Berl. 10 (1920): 153–214; Berlin.
- GERSTAECKER, A. (1857): Beitrag zur Kenntnis exotischer Stratiomyiden. – Linnaea ent. 11: 261–350; Leipzig.
- HOLLIS, D. (1963): New and little known Stratiomyidae (Diptera, Brachycera) in the British Museum. – Ann. Mag. nat. Hist. (5)13 (1962): 557–565; London.
- JAMES, M. T. (1947): The Oriental species of *Oplodontha* (Diptera: Stratiomyidae). – Pan-Pacif. Entomologist 23: 167–170; San Francisco.
- (1957): Some Sarginae, collected in South India. – Proc. ent. Soc. Wash. 59: 25–30; Washington.
 - (1975) Family Stratiomyidae. – In: DELFINADO, M. D. & HARDY, E. (eds.): A catalog of the Diptera of the Oriental Region. – Vol. 2: 14–42; Honolulu (University Press of Hawaii).
- KERTÉSZ, K. (1914): Vorarbeiten zu einer Monographie der Notacanthen XXIII–XXXV. – Anns hist.-nat. Mus. natn. hung. 12: 449–557; Budapest.
- (1916): Vorarbeiten zu einer Monographie der Notacanthen XXXVI–XXXVIII. – Anns hist.-nat. Mus. natn. hung. 14: 123–218; Budapest.
 - (1921): Vorarbeiten zu einer Monographie der Notacanthen XXXIX–XLIV. – Anns hist.-nat. Mus. natn. hung. 18 (1920–1921): 153–176; Budapest.
- KRIVOSHEINA, N. P. (1983): New data on soldier-flies of the genus *Wallacea* Doleschall and related groups (Diptera, Stratiomyidae). – Bull. zool. Mus. Univ. Amst. 9: 97–106; Amsterdam.
- LINDNER, E. (1955): Stratiomyiden von Ceylon (Dipt.). – Verh. naturf. Ges. Basel 66: 176–184; Basel.
- (1966): Stratiomyiden von Madagaskar. – Stuttgarter Beitr. Naturk. 156: 1–26; Stuttgart.
- MASON, F. (1997): Revision of the Afrotropical genus *Microchrysa* Loew, 1855 (Diptera: Stratiomyidae, subfamily Sarginae). – Anns Mus. r. Afr. cent. (Sér. Zool.) 269: 1–90; Teruren.

- MEIJERE, J. C. H. DE (1911): Studien über südostasiatische Dipteren VI. – Tijdschr. Ent. **54**: 258–432; Den Haag.
- NAGATOMI, A. (1975): The Sarginae and Pachygasterinae of Japan (Diptera: Stratiomyidae). – Trans. R. ent. Soc. Lond. **126** (1974): 305–421; London.
- (1990): Species-groups of *Sargus* and a new Japanese species (Diptera, Stratiomyidae). – Jap. J. Ent. **58**: 735–745; Tokyo.
- ROZKOŠNÝ, R. & HAUSER, M. (1998): A new species of *Ptecticus* Loew (Diptera: Stratiomyidae) from Sri Lanka. – Studia dipterologica **5**(2): 337–342; Halle.
- ROZKOŠNÝ, R. & KOVAC, D. (1996): The Malaysian soldier flies of the genus *Ptecticus* Loew 1855, including new records and descriptions of three new species (Insecta: Diptera: Stratiomyidae). – Senckenberg. biol. **75**: 181–191; Frankfurt.
- WULP, F. M. VAN DER (1885): Note XIV. On exotic Diptera. Part 2. – Notes Leyden Mus. **7**: 57–86; Leyden.

Authors' addresses:

Dipl.-Biol. MARTIN HAUSER, Staatl. Museum für Naturkunde (Museum am Löwentor), Rosenstein 1, D-70191 Stuttgart (Germany) and
Prof. RUDOLF ROZKOŠNÝ, Department of Zoology and Ecology, Faculty of Science, Masaryk University, Kotlářská 2, CZ-611 37 Brno (Czech Republic).



3 9088 01234 2218

ISSN 0341-0145

Schriftleitung: Dr. Wolfgang Seeger, Rosenstein 1, D-70191 Stuttgart
Gesamtherstellung: Gulde-Druck GmbH, D-72072 Tübingen